

REMARKS

This amendment is submitted in response to the Office Action dated October 25, 2000. In the Office Action, the Examiner objected to the use of trademarks. In addition claims 1-15 were rejected under 35 USC §102(b) as being anticipated by or, in the alternative, under 35 USC §103(a) as being obvious over DiPoto, U.S. Patent No. 5,558,930. Moreover, claims 1, 9-15, 17, 21 and 23 were rejected under 35 USC §102(b) as being anticipated by Bader et al., U.S. Patent No. 5,725,962. Further, claims 1-23 were rejected under 35 USC §102(b) as being anticipated by or, in the alternative, under 35 USC §103(a) as being obvious over Kudo et al. U.S. Patent No. 5,346,764. Finally, claims 1-25 were rejected under 35 USC §103(a) as being unpatentable over Kudo et al.

With respect to the objection by the Examiner to the use of trademarks, applicants have amended the specification to make clear the proprietary nature of the trademarks. Applicants submit that the amendments to the specification overcome the objections thereto.

With respect to the rejection of the claims under 35 USC §102(b) as being anticipated by DiPoto, Bader et al. or Kudo et al. these rejections are respectfully traversed in view of the claims as amended and for the reasons that follow. Specifically, independent claims 1 and 23 were amended to define that the film structure comprises a multilayer film structure having a second layer comprising a blend of a low density poly(ethylene) copolymer and a plastomer wherein the layer has a density range from about 0.89 g/cc to about 0.93 g/cc. Moreover, claims 1 and 23-25 were amended to define that the multilayer film structure has orientation in the machine direction. This unique combination of elements is nowhere described or otherwise taught in any of the references of record, as noted below.

DiPoto merely teaches a multilayer film structure having a barrier layer and at least one heat sealant layer that is oriented by compression rolled orientation. The compression rolled orientation allows for the production of multilayer coextruded films comprising dissimilar polymers and to achieve orientation "at the lower temperatures required to orient the low melting point sealants." (col. 2, lines 36-40). Specifically, the object of DiPoto is to create a multilayer film structure having "improved barrier properties due to the compression rolled orientation that also has heat sealable functionality due to the presence of a low melting point sealant layer." (col. 4, lines 4-6).

Moreover, Bader et al. merely teaches a multilayer film structure of high density polyethylene and a skin layer of either ethylene-propylene-butene terpolymer blends or ethylene-propylene blends. Specifically, the multilayer film structure described and taught in Bader et al. merely provides films having "good dead fold properties, optical clarity, good slip properties, and good receptivity to metallizing." (col. 2, lines 39-41).

Further, Kudo et al. merely relates to a resin laminate that is composed of a heat sealable layer and a layer of polyethylene. The resin laminate may provide a film structure having "superior ... sealability at low temperatures, sealability at low temperatures, sealability of impurities, and a resistance to pinholes and good in film forming and convertivity." (col. 2, lines 49-54).

However, the present invention as claimed in claims 1 and 23 have nothing to do with improving barrier properties of the films produced via the compression rolled orientation technique, as taught in DiPoto, and improving dead fold properties and receptivity to metallizing, as taught in Bader et al. Moreover, the multilayer film of the present invention is not related merely to heat sealability, as taught in Kudo et al. The claims, as amended, define multilayer film structures that have improved seal and tear properties that stem from the unique combination of features of the multilayer film. More specifically, the combination of a high density poly(ethylene) layer coextruded with a layer of a blend of low density poly(ethylene) and a plastomer and further having orientation in the machine direction provides the multilayer film structure with improved sealability and with an improved ability to tear when gripped and pulled by an individual. Nowhere do the cited references provide this combination of features for this purpose. Since DiPoto, Bader et al. fail to disclose or teach the elements defined in amended claims 1 and 23 and Kudo et al. fails to disclose or teach the elements defined in amended claims 1 and 23-25, the rejections thereto have been overcome and should be withdrawn.

Claims 2-22 depend from independent claim 1. These claims are further believed allowable over the references of record for the same reasons set forth with respect to their parent claims because each sets forth additional structural elements of Applicants' novel film structure.

Moreover, Applicants have added new claims 26-34 to the present invention. Applicants submit that newly added claims 26-34 are novel and non-obvious over any of the art of record, taken singly or in combination. Further, the claims are clearly supported by the specification.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."

CONCLUSION

In view of the foregoing remarks and amendments, Applicants respectfully submit that all of the claims are in allowable form and that the application is now in condition for allowance. If, however, any outstanding issues remain, Applicants urge the Examiner to telephone Applicants' attorney so that the same may be resolved and the application expedited to issue. Applicants respectfully request the Patent Office to indicate all claims as allowable and to pass the application to issue.

Date: March 26, 2001

Respectfully submitted,

By: 

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Packet No. 24180-667

Application No. 09/470,386

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Kw
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In re Genske et al. U.S. Patent Application)
09/470,386)

Filed: December 22, 1999)

For: Multilayer Film Structures Having)
Improved Seal and Tear Properties)

Examiner: M. Jackson)

Group Art Unit: 1773)

Certificate of Mailing

I hereby certify that on March 26, 2001, this correspondence was deposited with the United States Postal Service, first class mail, addressed to:

Assistant Commissioner for Patents
Washington, DC 20231.


Stephen T. Scherrer, Registration No. 45,080

Version with Markings to Show Changes Made

Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

This paper is being submitted in response to the Office Action dated October 25, 2001, as a supplement to the Amendment filed herewith. This version shows the changes made to the specification and to the claims with markings. The marked changes are as follows:

In the Specification:

Paragraph beginning at line 26, page 5, has been amended as follows:

First layer (1) comprises poly(ethylene) or blended poly(ethylene) wherein the poly(ethylene) has a density range from about 0.93 g/cc to about 0.97 g/cc. Poly(ethylenes) having this density range are exemplified by medium density poly(ethylene) (MDPE) and high-density poly(ethylene) (HDPE). A preferred density range for the poly(ethylene) of said layer is from about 0.94 g/cc to about 0.965 g/cc. Poly(ethylenes) having this density range are exemplified by HDPE. A particularly preferred poly(ethylene) for said first layer is high density poly(ethylene) (HDPE) having a density of about 0.96 g/cc. HDPE can further be exemplified by [Equistar M-6060] Equistar Alathon® M-6060 HDPE.

Paragraph beginning at line 4, page 6, has been amended as follows:

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The first layer may optionally contain a colorant. Colorants suitable for practice in this invention can be exemplified by [Ampacet KM82199] Ampacet Corp. KM82199 colorant. The first layer may also optionally contain processing aids and/or fillers. In a preferred embodiment of the present invention the poly(ethylene) in the first layer comprises about 80% to about 100% of the total layer. If a colorant is present, the colorant comprises from about 0% to about 20% of the total layer. Unless otherwise specified, percentages as used herein are by weight.

Paragraph beginning at line 18, page 6, has been amended as follows:

The second layer may optionally contain a colorant. Colorants suitable for practice in this invention can be exemplified by [Ampacet KM82199] Ampacet Corp. KM82199 colorant. The second layer can also optionally contain processing aids and/or fillers. In a preferred embodiment of the present invention the poly(ethylene) in the second layer comprises about 70% to about 100% of the total layer. If a colorant is present, the colorant comprises from about 0% to about 30% of the total layer.

Paragraph beginning at line 3, page 9, has been amended as follows:

A multilayer film, shown in Table I, was made having a sealant layer which is a blend of a plastomer [(Dow PT1409)] (Dow Affinity™ PT1409 plastomer) at 30% LLDPE [(Exxon LD-135.09)] (ExxonMobile LD-135.09 LDPE) at 65%, and a slip concentrate (Ampacet Corp. 10090 slip concentrate) at 5%; an outside layer which is a blend of white concentrate [(Ampacet KM82199)] (Ampacet Corp. KM82199 colorant) at 20% and an HDPE resin [(Equistar M-6060)] (Equistar Alathon® M-6060 HDPE) at 80%; and a middle layer which is a blend of white concentrate [Ampacet KM82199] (Ampacet Corp. KM82199 colorant) at 25% and an HDPE resin [(Equistar M-6060)] (Equistar Alathon® M-6060 HDPE) at 75%. Optionally, the middle layer may contain a regrind of the overall multilayer film described above at about 0% to about 40%, replacing the HDPE component.

In the claims:

Please amend the claims as follows:

1. (Amended) A multilayer film structure having at least two layers comprising:

- (a) A first layer comprising poly(ethylene) or blended poly(ethylene) wherein said first layer poly(ethylene) is selected from poly(ethylenes) having a density from about 0.93 g/cc to 0.97 g/cc; and
- (b) A second layer comprising a blend of low density polyethylene and a plastomer [poly(ethylene) or blended poly(ethylene)] wherein said second layer has [poly(ethylene) is selected from poly(ethylenes) having] a density range from about 0.89 g/cc to 0.93 g/cc and wherein said second layer is capable of forming a heat seal,
wherein said multilayer film structure has orientation in the machine direction.

23. (Amended) A method of making a package comprising:

(1) providing a multilayer film having:

- (a) A first layer comprising a poly(ethylene) or a blended poly(ethylene) wherein said first layer poly(ethylene) is selected from poly(ethylenes) having a density from about 0.93 g/cc to about 0.97 g/cc;
- (b) A second layer comprising a blend of low density polyethylene and a plastomer [poly(ethylene) or blended poly(ethylene)] wherein said second layer [poly(ethylene) is selected from poly(ethylenes)] has a density range from about 0.89 g/cc to about 0.93 g/cc and wherein said second layer is capable of forming a heat seal,
wherein said multilayer film has orientation in the machine direction; and

(2) laminating said multilayer film structure to another film structure or a packaging component to form a package.

24. (Amended) A method of making a package comprising: (1) providing a multilayer film having:

- (a) A first layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.93 g/cc to 0.97 g/cc and wherein said first layer may optionally contain a color pigment and/or filler;
- (b) A second layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.93 g/cc to 0.97 g/cc and

wherein said second layer may optionally contain a color pigment and/or a filler; and

- (c) A third layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.89 g/cc to 0.93 g/cc and wherein said third layer is capable of forming a heat seal,

wherein said multilayer film has orientation in the machine direction; and

(2) laminating said multilayer film structure to another film structure or a packaging component to form a package.

25. (Amended) A package for flowable material comprising: (1) a first multilayer film structure comprising: (a) a first layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.93 g/cc to 0.97 g/cc and wherein said first layer may optionally contain a color pigment, and/or a filler; (b) a second layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.93 g/cc to 0.97 g/cc and wherein said second layer may optionally contain a color pigment and/or a filler; and (c) a third layer comprising poly(ethylene) or a blended poly(ethylene) wherein said poly(ethylene) has a density range from about 0.89 g/cc to 0.93 g/cc and wherein said third layer is capable of forming a heat seal and further wherein the first multilayer film structure has orientation in the machine direction; and

(2) at least one other film structure capable of being laminated to said first multilayer film structure.

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